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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/533,137 | 04/29/2005 | Hidesato Mano | KES-US040474 | 2300 |
| 22919 7590 04/17/2009 GLOBAL IP COUNSELORS, LLP 1233 20TH STREET, NW, SUITE 700 WASHINGTON, DC 20036-2680 | | | | |
| EXAMINER | | | | |
| HAUTH, GALEN H | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 1791 | | | | |
| MAIL DATE | | DELIVERY MODE | | |
| 04/17/2009 | | PAPER | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/533,137

Applicant(s)

MANO, HIDESATO

Examiner

GALEN HAUTH

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/10/2009 has been entered.

Response to Amendment

2. Acknowledgment is made to applicant's amendment to claim 1 and the cancellation of claims 2 and 10. No new matter has been added.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1 and 3-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (PN 6245182) in view of Kawakubo et al. (PN 4837274).

a. With regards to claim 1, Nakamura teaches an active energy ray curable resin composition which comprises a polymer having a methacryl equivalent weight of from 100 to 300 g/eq, a hydroxyl value of from 20 to 500, and a weight average molecular weight of 5,000 to 50,000. Nakamura more specifically teaches that the methacryl polymer is glycidyl methacrylate which is known by one of the ordinary skill in the art to comprise epoxy groups (col 3 In 34-52). Nakamura teaches that the reaction product obtained by poly-addition of glycidyl methacrylate based polymer and alpha, beta unsaturated monocarboxylic acid (the polymer is the reaction product of the addition of a monocarboxylic acid having an unsaturated double bond to a polymer having an epoxy group) (col 3 In 49-52). Nakamura teaches the inclusion of a polyfunctional isocyanate (heat curing agent) for the purposes of providing tack to the material prior to curing (col 8 In 1-11).

b. Kawakubo teaches that epoxy resins, phenol resins, silane coupling agents, alkyl titanates, or polyisocyanates are equivalents for adhesion modifiers (col 10 In 28-33). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a silane coupling agent in place of the multifunctional isocyanate of Nakamura, because such are obvious equivalents for adhesion accelerators as taught by Kawakubo.

- c. With regards to claim 3, Nakamura teaches that the glycidyl methacrylate based polymer may be a homopolymer of glycidyl methacrylate or a copolymer of glycidyl methacrylate (col 3 ln 53-56).
- d. With regards to claim 4, Kawakubo teaches using a silane coupling agent as an equivalent to polyisocyanate as described in the rejection of claim 1 above (col 10 ln 28-33).
- e. With regards to claim 5, Nakamura teaches using a photopolymerization initiator (col 8 ln 60-62).
- f. With regards to claims 6 and 7, Nakamura teaches of a transfer material comprising a protective layer on a releasable sheet (col 3 ln 30-46, col 4 ln 14-27).
- g. With regards to claim 8, Nakamura teaches a method for producing a molded article comprising the steps of (col 3 ln 62-64, col 4 ln 14-23).
 - i. Adhering transfer material onto a substrate of a molded article (col 3 ln 64-67);
 - ii. Releasing the substrate sheet (removing the releasable base sheet) (col 4 ln 1)
 - iii. Irradiating with an active energy ray (irradiating the surface of the molded article with an active energy ray) (col 4 ln 2).
- h. With regards to claim 9, Nakamura et al. teaches a method of producing a molded article comprising the steps of (col 4 ln 3-6)

- iv. Placing a transfer material in a mold (applying a transfer material to the inside of a mold) (col 4 ln 7-8).
- v. Injecting a resin into a cavity for filling, molding, and simultaneously adhering the transfer material to the surface of the molded resin (filling a cavity of the mold with a resin by injection to thereby form a molded article and adhering the transfer material to a surface of the molded article) (col 4 ln 8-11);
- vi. Releasing the substrate sheet (removing the releasable base sheet) (col 4 ln 12)
- vii. Irradiating with an active energy ray (irradiating the surface of the molded article with an active energy ray) (col 4 ln 13).

Response to Arguments

- 6. Applicant's arguments with respect to claims 1, 3, 6-9 rejected under 35 USC 102 have been considered but are moot in view of the new ground(s) of rejection.
- 7. Applicant's arguments filed 03/10/2009 with respect to Nakamura in view of Kawakubo under 35 USC 103 have been fully considered but they are not persuasive.
 - a. With regards to applicant's argument that Nakamura teaches away from the use of a polyisocyanate substitute is not persuasive, as Nakamura teaches the purpose of the isocyanate (col 8 ln 1-11) without a specific teaching against any substitutions that could provide the same result.
 - b. With regards to applicant's argument that Kawakubo teaches away from the use of a non-isocyanate, the cited use of a polyisocyanate in Kawakubo at

col 5 In 5-13 refers to an embodiment of synthesis of a component of the polymer, not a heat curing agent. The alternate citation of col 10 In 26-32 refers to the examiners cited section in which polyisocyanate is shown to be an obvious equivalent to a silane coupling agent. This does not constitute a teaching away of the silane coupling agent, as it is listed as an alternative in Kawakubo.

c. With regards to applicant's arguments that a urethane bond is required by Nakamura and that a siloxane bond would destroy it, Nakamura teaches that the purpose of the urethane bond crosslinking is to provide a specific consistency (col 8 In 12-25) thus an equivalent that can promote crosslinking or adhesion would provide the same effect regardless of the bond type.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to GALEN HAUTH whose telephone number is (571)270-5516. The examiner can normally be reached on Monday to Thursday 8:30am-5:00pm ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571)272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/GHH/

/Christina Johnson/
Supervisory Patent Examiner, Art Unit 1791